

(一) 全球環境教育夥伴 (GEEP) 會一方面：

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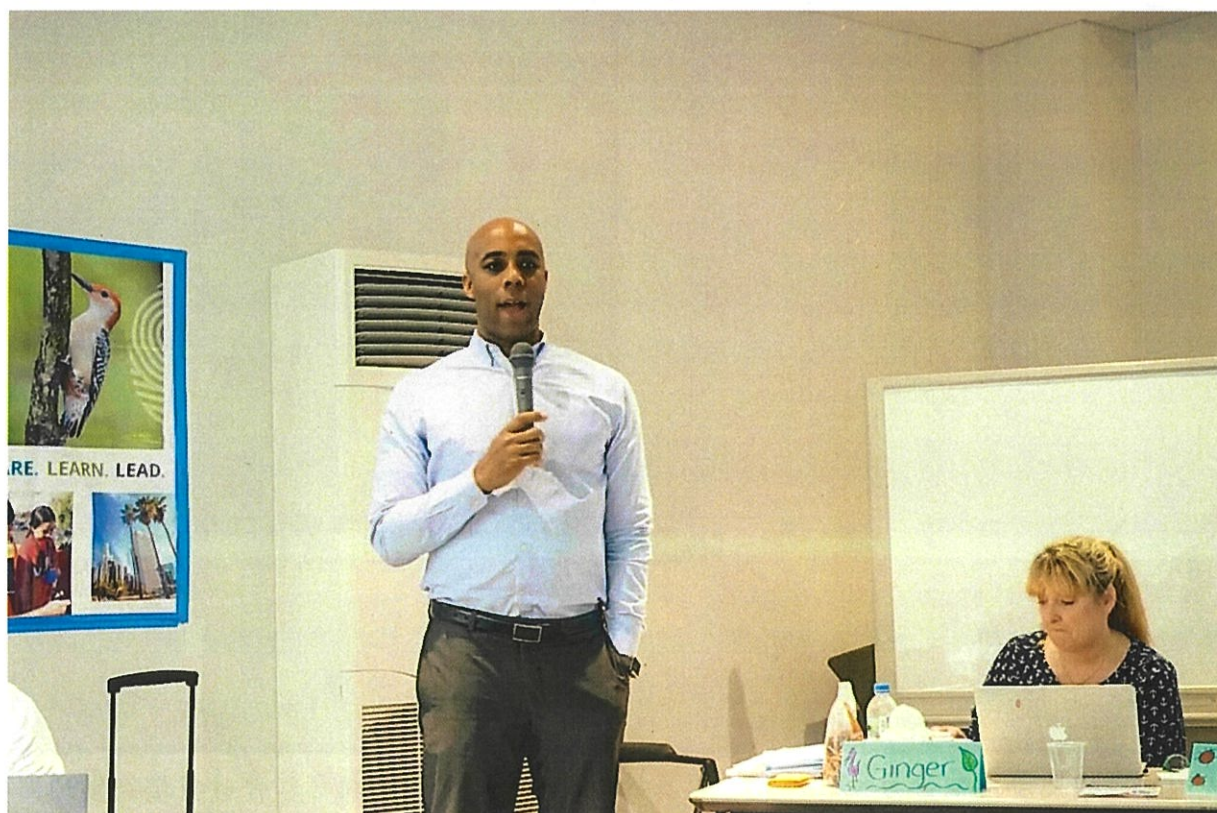
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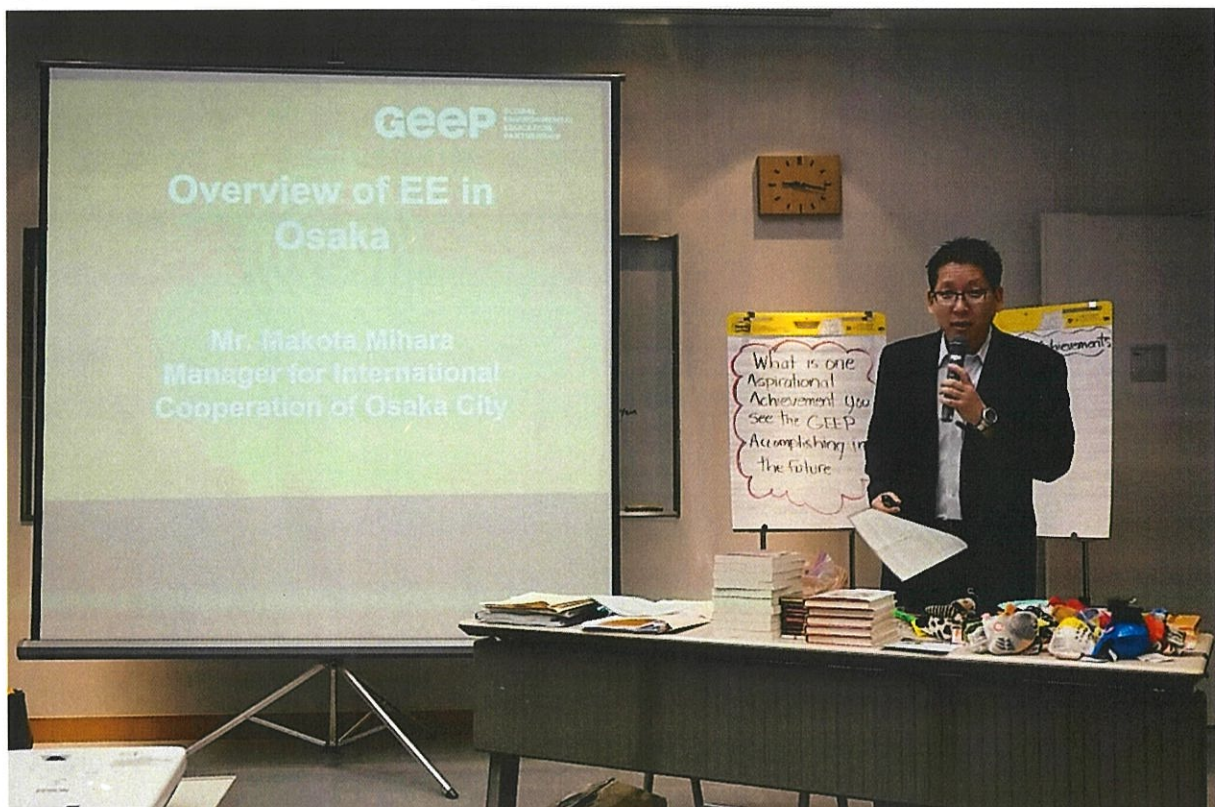
會議開始由北美環境教育學會執行長 Judy Braus 致歡迎詞



美國環保署代表 Justin Harris 於「2017 年全球環境教育夥伴計畫諮詢顧問團會議」致歡迎詞

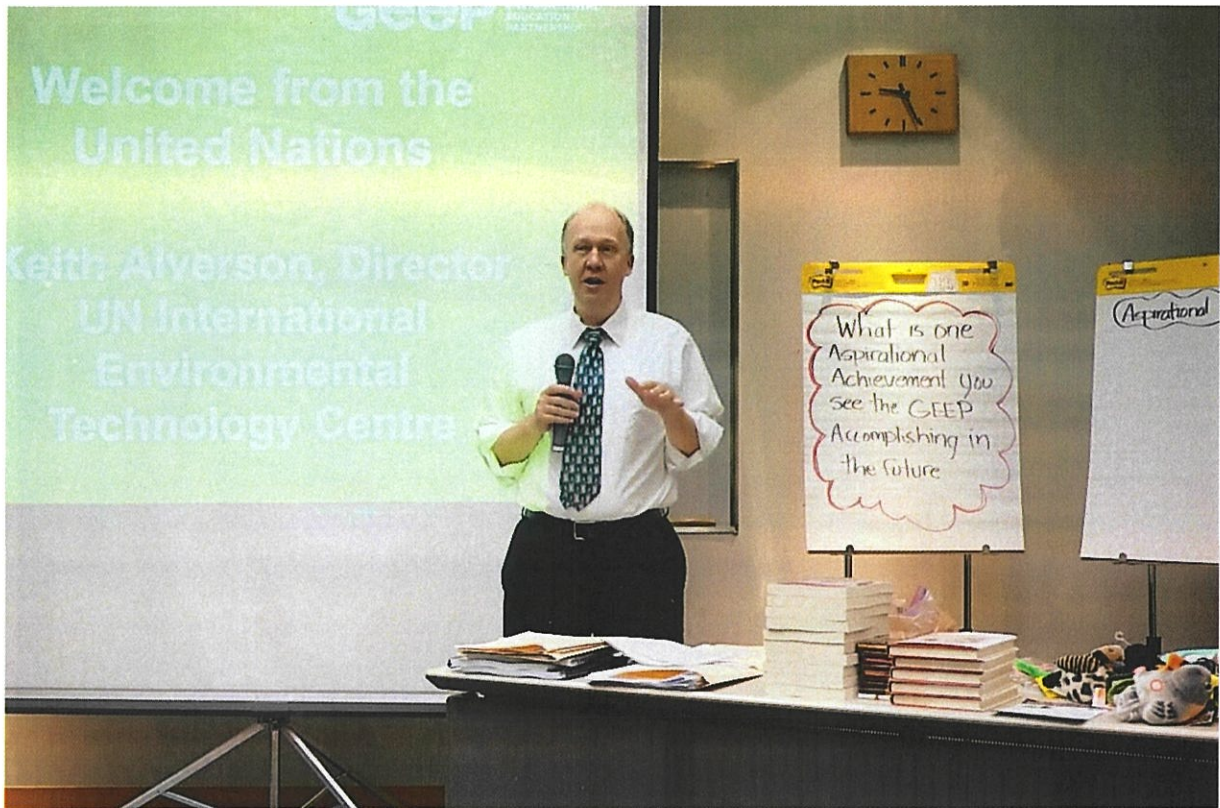


署長室王欽彥副主任致歡迎詞

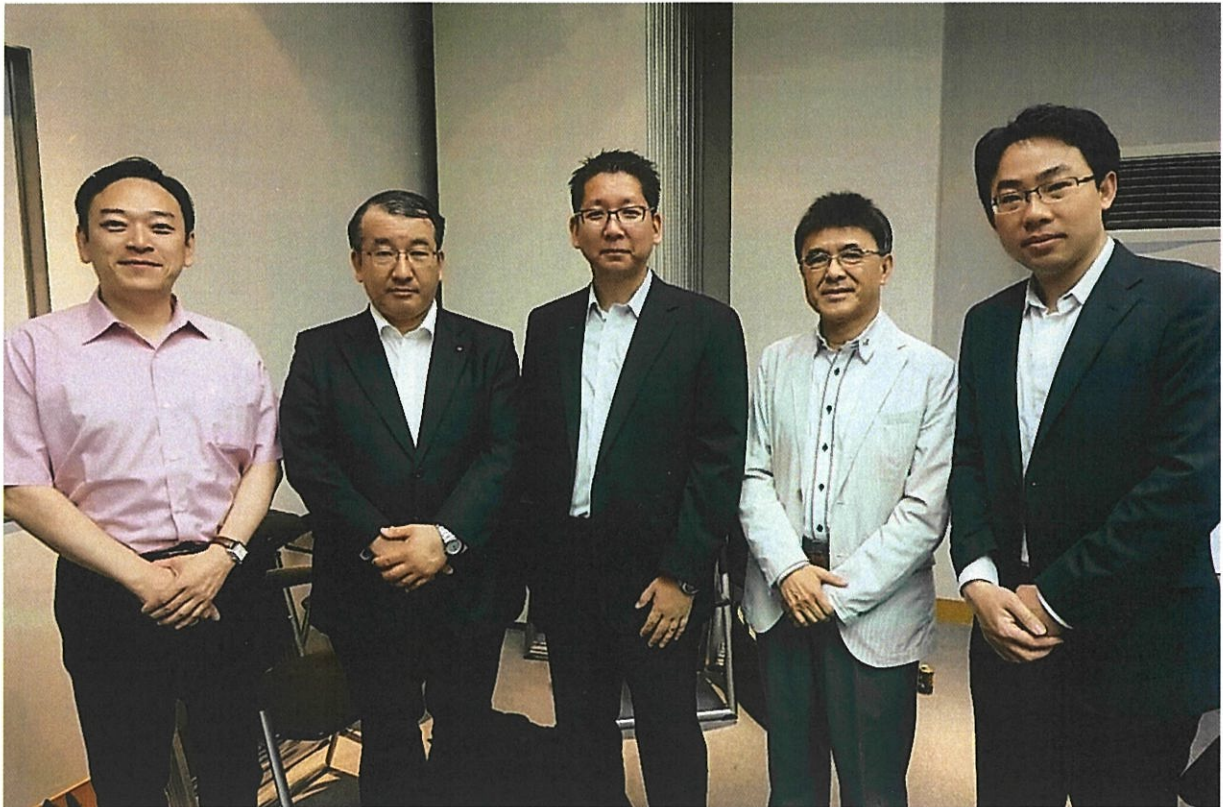


大阪市環境局都市間協力担当課長三原真於「2017 年全球環境教育夥伴計畫諮詢顧問團會議」中講解大阪市環境教育現況





聯合國環境規劃署國際環境技術中心(IETC)主任 Keith Alverson 致歡迎詞



與大阪市及台北駐大阪辦事處謝銘宏課長合影：由左至右王欽彥副主任、大阪市環境局環境施策部長堀井久司、大阪市環境局都市間協力担当課長三原真、王俊秀教授、台北駐大阪辦事處謝銘宏課長合影



Joe Heimlich 博士說明如何使用不同觀點評估組織發展狀態



日本環境省綜合環境政策局環境教育推進室池田怜司說明日本環境教育發展





為感謝聯合國環境規劃署國際環境技術中心 GEEP 成員 Mahesh Pradhan 積極促成此次日本大阪「2017 年全球環境教育夥伴計畫諮詢顧問團會議」，由王欽彥副主任代表致贈紀念品以示感謝



諮詢顧問團成員會議結束後於聯合國環境規劃署國際環境技術中心合影留念



## Advisory Group Meeting DRAFT AGENDA

**Meeting Location:** UN Environment International Environmental Technology Centre (IETC)  
2-110, Ryokuchi-koen, Tsurumi ku, Osaka 538-0036

**Hotel:** Hotel Keihan Kyobashi Grande, 2 Chome-1-38 Higashinodamachi, Miyakojima Ward, Osaka, Osaka Prefecture 534-0024, Japan

**Dates:** Wednesday, May 24<sup>th</sup> and Thursday, May 25<sup>th</sup>

**Objectives for the Meeting:**

- Agree on what success looks like for the GEEP and identify key elements for an evaluation plan
- Review the goals and strategy for the small grants/ fellowship initiative and discuss the organizations / individuals who could potentially receive funding
- Reach a shared agreement on goals for the Puerto Rico Meeting (including a possible GEEP Charter as part of Tbilisi+40)
- Determine key considerations and next steps in planning for a SE Asia regional network meeting in 2018
- Brainstorm ideas for how to best use the case studies, and what training and outreach should be offered through the GEEP
- Revisit the “think tank” idea to determine how it can best serve EE professionals in the year ahead (white papers, charter, etc.)

**Wednesday, May 24**

**Meeting Location:** UN Environment International Environmental Technology Centre (IETC)

\*IETC is a 10-minute subway ride from hotel, plus a brief walk; please meet Mahesh in the hotel lobby at 8:00 am and he will guide you to IETC.

*Breakfast is served at hotel starting at 7 am.*

- |       |   |
|-------|---|
| 8:00  | Advisor gather in hotel lobby to be escorted to the UN complex by Mahesh.   |
| 9:00  | Introductions, welcome, and meeting overview<br><i>-Welcome from the GEEP Leadership Team, Mr. Makoto Mihara, Manager for International Cooperation, Osaka City; and Dr. Keith Alverson, Director of UNEP International Environmental Technology Centre</i> |
| 10:00 | What does success for the GEEP look like?<br><i>-Presentation by Dr. Joe Heimlich, Center for Research and Evaluation</i>   |
| 10:45 | BREAK   |
| 11:00 | Small group discussion: Envisioning success   |

- 11:45 Report outs and discussion of next steps
- 12:15 LUNCH on your own
- 13:30 GEEP Call to Action for Tbilisi+40 at NAAEE Conference  
*-Alan Reid will help frame the discussion*
- 15:15 BREAK
- 15:30 GEEP Small Grants Discussion  
*-Judy Braus, facilitator*
- 16:45 Adjourn
- 18:30 DINNER at Zuientei (Address: 2-2-22 Shiromi Chuo-Ku / 15F Hotel Monterey Lasoeur, Osaka, Osaka 540-0001, Osaka Prefecture)

\*Meet in hotel lobby to leave by 6:15 pm

[\(Google map of walking directions from hotel to Zuientei\)](#)

#### **Thursday, May 25<sup>th</sup>**

**Location:** UN Environment International Environmental Technology Centre (IETC))

*Breakfast is served at hotel starting at 7 am.*

- 8:00 Advisors leave for subway on their own
- 9:00 Introductions and overview of the day
- 9:15 EE in Japan  
*-Presentation by Reiji Ikeda, Ministry of Environment- Japan*
- 9:30 Setting the context for a GEEP Southeast Asia Regional Network  
*-Kartikeya Sarabhai will help frame the discussion*
- 10:45 BREAK
- 11:00 How to make the most of the GEEP case studies
- 12:00 LUNCH
- 13:30 The GEEP Think Tank: one or two key ideas for the year ahead
- 14:30 Building support for the GEEP
- 15:15 BREAK
- 15:30 Revisiting the evaluation discussion from Day 1 and other outstanding issues
- 16:15 Roles for the Advisory Group and next steps
- 16:45 Closing thoughts
- 17:00 Meeting adjourns. Safe travels!

**Advisory Group Meeting  
Participant Bios  
Spring 2017**

**JUDY BRAUS**

**EXECUTIVE DIRECTOR, NORTH AMERICAN ASSOCIATION FOR ENVIRONMENTAL EDUCATION (NAAEE)  
UNITED STATES**



Judy Braus brings to her role as NAAEE Executive Director a wealth of experience in the environmental education profession, with a focus on conservation education, diversity and inclusion, and using the power of education to help create healthier communities that empower people to help restore and protect the environment. She comes to NAAEE from the National Audubon Society, where she was the Senior Vice President of Education and Centers, overseeing an extensive nationwide network of nature centers and educators. Prior to that, she led the education programs at World Wildlife Fund (WWF), the U.S. Peace Corps, and the National Wildlife Federation (NWF). Judy also has extensive experience with NAAEE, having served in a number of capacities in the past two decades, including past president, conference chair, head of the elementary and secondary commission, and editor of a number of NAAEE monographs. Additionally, Judy is a proven fundraiser, working with foundations, corporations, government, and individual donors to raise more than \$35 million for education and conservation. She is committed to strong partnerships and has negotiated and implemented lasting relationships with organizations, including Toyota Motor North America, REI, National Geographic, the U.S. Fish and Wildlife Service, Disney’s Animal Kingdom, Eastman Kodak, and Aardman Animations, among others.

**WEN-FENG CHANG**

**ENVIRONMENTAL COORDINATOR, DEPARTMENT OF COMPREHENSIVE PLANNING  
ENVIRONMENTAL PROTECTION ADMINISTRATION-TAIWAN**

**TAIWAN**



Wen-Feng serves as a coordinator in environmental education at the Department of Comprehensive Planning, EPA Taiwan. She is in charge of the Global Environmental Education Partnership and the US-Taiwan Eco-Campus Partnership Program. She reviews grant applications from NPOs, schools, local governments, and other educational facilities for the Environmental Education Fund.

**BILL FINNEGAN**  
**FOUNDER, TAMARACK MEDIA**  
**UNITED KINGDOM**



Bill Finnegan is a documentary filmmaker, website developer, and environmental education consultant. In 2003 he co-founded Tamarack Media, which provides communication services to a variety of environmental organizations, including government agencies, NGOs, and academic institutions.

**JUNKO FUJIOKA**  
**GENDER FOCAL POINT AND PROGRAMME ASSISTANT**  
**UNITED NATIONS ENVIRONMENT PROGRAMME**  
**INTERNATIONAL ENVIRONMENTAL TECHNOLOGY CENTER**  
**JAPAN**



Junko Fujioka joined UNEP's International Environmental Technology Centre (UNEP IETC) in Osaka, Japan in 2014. At IETC, she serves as Gender Focal Point and Programme Assistant. Prior to this, she worked in the private sector and for Japan International Cooperation Agency (JICA). At JICA, Junko developed and implemented various projects on education, agriculture, and transportation as Country Officer for the Philippines.

Junko is a Japanese national and holds a Master of Philosophy in Development Studies with a focus on gender from Institute of Development Studies at University of Sussex, UK.

**JUSTIN HARRIS**  
**SENIOR PROGRAM MANAGER, U.S. ENVIRONMENTAL PROTECTION AGENCY**  
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Justin Harris is a Senior Program Manager with the U.S. Environmental Protection Agency's Office of Regional & Bilateral Affairs. He is the U.S. coordinator for the International Environmental Partnership. He has direct responsibility for collaborative programs addressing toxics, waste, water, climate change, enforcement/governance, and environmental education. Mr. Harris is the agency's lead for the Cities Clean Air Partnership and serves as a liaison to the American Institute in Taiwan. Prior to joining the EPA in 2009, Mr. Harris worked in the private sector in Asia for ten years. He is fluent in Mandarin Chinese and graduated with an M.S. in Foreign Service from Georgetown University in 2002.



**JOE E. HEIMLICH**  
**CO-DIRECTOR, COSI CENTER FOR RESEARCH AND EVALUATION**  
**SENIOR RESEARCHER, COSI LIFELONG LEARNING GROUP**  
**UNITED STATES**



Joe E. Heimlich, Ph.D. is Co-Director for the Center for Science & Industry (COSI) Center for Research and Evaluation, and a Senior Researcher in the Center's Lifelong Learning Group. His research and evaluation work focuses on projects related to informal learning and capacity building for zoos, nature centers, parks, gardens, science centers, and other museums. He is also an Academy Professor Emeritus with The Ohio State University where he was an Extension Specialist in museums and organizational capacity building, served as Leader in Environmental Science for Ohio State University Extension, and held appointments in the School of Environment and Natural Resources, the Environmental Science Graduate Program, and the College of Education and Human Ecology. Joe has been engaged in environmental free-choice learning for over 35 years and is the author of over a hundred academic journal articles, chapters, and books, and has written more than 350 reports, fact sheets, bulletins, white papers, and popular publications.

**IAN HUMPHREYS**  
**EXECUTIVE DIRECTOR, KEEP NORTHERN IRELAND BEAUTIFUL**  
**IRELAND**

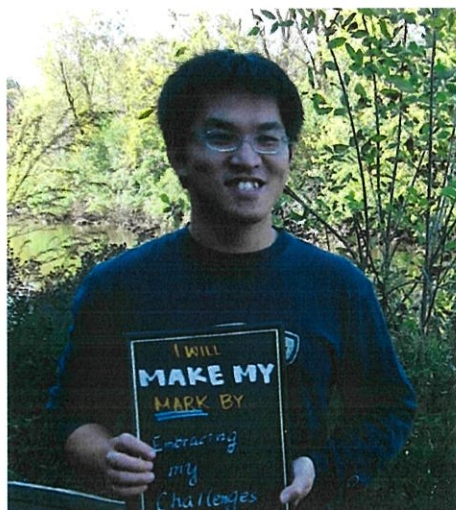


Ian joined Keep Northern Ireland Beautiful as Chief Executive Officer in 2008 after 14 years with The Conservation Volunteers. He has strong environmental and research credentials, including a Ph.D. from The Queen's University of Belfast. At Keep Northern Ireland Beautiful Ian has overseen rapid growth in Eco-Schools, the re-introduction of the Seaside Awards, and the development of litter-related campaigns, such as the BIG Spring Clean, monitoring including the Northern Ireland Litter Survey, and research. He has also developed a range of support services for councils including the Northern Ireland Environmental Quality Forum and the litter summit. He is involved in the running of Copeland Bird Observatory in a voluntary capacity. Ian says "All our work seeks to bring about changes in people's behaviour to create a cleaner, greener, and more prosperous Northern Ireland."

**CHENG-KUAN (KEVIN) KAN**

**CHIEF ENGINEER, ENVIRONMENTAL SCIENCE TECHNOLOGY CONSULTANTS CORPORATION**

**TAIWAN**



Kevin Kan earned both his M.S. in Sustainable Systems and M.U.P. in Environmental Planning from University of Michigan. He is currently a chief engineer at Environmental Science Technology Consultants Corporation (ESTC). ESTC is responsible for assisting the Environmental Protection Administration-Taiwan with the United States-Taiwan Eco-Campus Partnership Program. In addition to environmental education, Kevin is also interested in issues related to climate change and resilient cities. His specialty at ESTC is organizational environmental management systems and carbon management. Kevin is now also working on an Eco-port development project, helping commercial ports in Taiwan to become more resilient and sustainable. He is fluent in Mandarin Chinese, English, and Japanese, so please feel free to ask him for help if you need any assistance.

**MPHEMELANG KETLHOILWE**

**ASSOCIATE PROFESSOR, UNIVERSITY OF BOTSWANA**

**BOTSWANA**



Mphemelang Ketlhoilwe (M.J.) is an Associate Professor of Environmental Education at the University of Botswana. He began working for the University of Botswana in 1999, after 15 years of service in the Curriculum Development Centre as an Education Officer (Environmental Education). Currently, he is the President of Environmental Education Association of Southern Africa (EEASA) and serves on the Advisory Board of the Global Environmental Education Partnership (GEEP).

**ALEX KUDRYAVTSEV**

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**RUSSIA**



Alex Kudryavtsev (pen name: Alex Russ) is an environmental education researcher, book editor, and online course instructor in the Cornell University Civic Ecology Lab. He has worked in environmental education since 1996 in Russia and then in the U.S. He completed his M.S. (2006) and Ph.D. (2013) degrees in environmental education at Cornell University. His research focused on urban environmental education and sense of place. Alex is the first editor of the "Urban Environmental Education Review" international textbook (Russ and Krasny, 2017) published by Cornell University Press (<http://tinyurl.com/UEERbook>). Alex has authored articles in top environmental education

journals, traveled seven continents to observe environmental education programs, and is interested to advance environmental education through research and educator training to foster environmental sustainability and human well-being. <http://ak383.org>

**PAUL OFEI-MANU**

**SENIOR POLICY RESEARCHER, INSTITUTE FOR GLOBAL ENVIRONMENTAL STRATEGIES**

**JAPAN**



Paul Ofei-Manu has a postgraduate educational background in agro-ecology (Ph.D.) and also in environmental sustainability management, including a thesis on education for sustainable development (M.Sc.). With ten years of sustainability education experience, including environmental education in the past four years, he has been fully involved in education-related activities (research, outreach, and networking) for the Institute for Global Environmental Strategies (IGES). These have included: a) ESD and ESC evaluation/assessments at the policy level; b) Assessment of EE implementation in the U.S.; c) country-level evaluation of climate change adaptation (CCA) and disaster risk reduction (DRR) projects and their synergies in Asia and Africa, and recently a UNESCO ESD implementation evaluation project. He is also familiar with ESD issues across scales through participation in ESD global, regional, and national policy processes.

**BETTY OLIVOLO**

**ASSISTANT DIRECTOR, NATURAL START ALLIANCE**

**NORTH AMERICAN ASSOCIATION FOR ENVIRONMENTAL EDUCATION**

**UNITED STATES**



Betty has a Master's degree in Early Childhood Education from the University of New Hampshire and is currently the Assistant Director of the Natural Start Alliance, NAAEE's early childhood program. In addition to being a classroom teacher for more than 15 years (in the US, Taiwan, China, and South Africa), Betty has also worked in the field of environmental education for more than 25 years. For 8 years she worked with Judy Braus at World Wildlife Fund, and prior to that, Betty worked at other environmental NGOs, including National Wildlife Federation and as Director of Project WILD.

**GINGER POTTER**

**SENIOR EDUCATION SPECIALIST, OFFICE OF ENVIRONMENTAL EDUCATION (OEE), U.S. ENVIRONMENTAL PROTECTION AGENCY**

**UNITED STATES**



Ginger is currently serving as the Technical Lead for the EECapacity Program, OEE's teacher training and professional development program. Her other duties include providing advice and consultation on the development, implementation, and management of national and international environmental education programming. Ginger also provides strategic planning, management, and organizational development expertise to EPA's environmental education programs, activities, and products. Ginger is responsible for research, evaluation, and program assessment, as well as strategic planning in the Office of Environmental Education.

**MAHESH PRADHAN**

**COORDINATOR, STRATEGIC PARTNERSHIPS AND KNOWLEDGE MANAGEMENT**

**INTERNATIONAL ENVIRONMENTAL TECHNOLOGY CENTER (IETC), UNITED NATIONS ENVIRONMENT PROGRAMME (UNEP)**

**JAPAN**



Mahesh has over 20 years of experience with the United Nations Environment Programme (UNEP) on Environmental Education. He launched the Global Universities Partnership on Environment and Sustainability (GUPES) in the lead up to the Rio+20 Summit, which currently comprises over 800 universities from Africa, Asia Pacific, Latin America and Caribbean, Europe, North America, and West Asia. Mahesh also launched UNEP's first Massive Open Online Course (MOOC) on ecosystems-based disaster risk reduction, with a rapidly increasing portfolio. He is working on a knowledge management platform on holistic waste management, and a graduate curriculum through UNEP's International Environmental Technology Centre in Osaka.

**GAYATRI RAGWHA**

**EDUCATION CONSULTANT**

**INDIA**



Gayatri Raghwa lived in Abu Dhabi, United Arab Emirates for 27 years and recently moved to her home country, India, to be with her family. She has worked to raise the profile of EE since its inception at Abu Dhabi. She has worked as a volunteer, with an NGO, and with the government to promote EE. At the Environment Agency-Abu Dhabi, where she worked as a senior specialist, she strategized for EE at the government level, developing, designing, and implementing programs for schools, colleges, and other audiences. She also developed MOUs with EE organizations, such as the NAAEE, Centre for Environmental Education, AAEE and also in other parts of the world. She has developed resource materials, such as books and manuals for varied audiences, regularly conducting training of trainer modules for school and college educators. She also contributes as a member to organizations, such as the Zayed Future Energy Prize, Eye on Earth, and United Nations Commission on Sustainable Development Education. She has developed and run successful programs like the Enviro-Spellathon, Sustainable Schools Initiative, and the Sustainable Campus Initiative for the Environment Agency-Abu Dhabi. She continues to work as a free-lance consultant developing resource materials for Abu Dhabi organizations and also with several other organizations in India.

**ALAN REID**

**ASSOCIATE PROFESSOR, MONASH UNIVERSITY**

**AUSTRALIA**

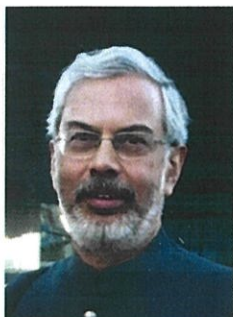


Alan Reid, co-leads the research and evaluation eePRO group of NAAEE, and was the award winner for NAAEE's outstanding contribution to research in 2015. He has edited the field's leading research journal, *Environmental Education Research*, since 2005, recently co-edited the Major Works of Environmental Education (Routledge, 2016), and works with the GEEP on the executive committee, including on case studies and international networking.

**KARTIKEYA V. SARABHAI**

**DIRECTOR, CENTRE FOR ENVIRONMENT EDUCATION, NEHRU FOUNDATION FOR DEVELOPMENT**

**INDIA**



Kartikeya V. Sarabhai is the founder and director of India's Centre for Environment Education (CEE), headquartered in Ahmedabad. He is a member of the United Nations Decade of Education for Sustainable Development Reference Group of UNESCO. He has long been associated with the International Union for Conservation of Nature and Natural Resources (IUCN), and was chair of South and South East Asia IUCN Commission on Education and Communication. He is currently vice-chair of the Indian National Commission of IUCN. He is also a member of the Earth Charter International Council. He was a member of the Indian delegation to the United Nations Conference on Environment and Development (UNCED) in Rio in 1992 and the World Summit on Sustainable

Development (WSSD) in Johannesburg in 2002, and Kartikeya co-authored India's report for UNCED. He has been closely associated with communication initiatives of United Nations Environment Programme (UNEP), especially those connected with ozone. He has served on several committees of India's Ministry of Environment and Forest and Ministry of Human Resource and Development.

**MARGIE SIMON**

**DIRECTOR GENERAL, CICEANA**

**MEXICO**



Margie Simon has a B.S. in Earth Science, a M.S. in Environmental Engineering and another M.S. in Infrastructure Management and Planning, all from Stanford University, receiving the last degree in 1980. After 15 years of various consulting and research jobs in the environmental field in Mexico and the United States, mostly related to solid, hazardous and municipal waste management, she began her career in Environmental Education and Capacity Building at CICEANA (The North American Center for Environmental Information and Communication) in 1995, where she has been Director since 2000. Her responsibilities at CICEANA include ensuring the fulfillment of their mission to promote an environmentally responsible culture, through program management and development in all operative areas, including environmental education, applied projects for sustainable development, multimedia environmental communication, and fundraising for this organization.

**ARJEN WALS**

**PROFESSOR, UNIVERSITY OF WAGENINGEN  
THE NETHERLANDS**



Arjen has 30 years of experience in research and practice nationally and internationally in the field of environmental and sustainability education. He is UNESCO chair in social learning and sustainable development, responsible for research, education, supervision, acquisition, and outreach in EE and ESE for Wageningen and Gothenburg University. He is also senior policy-advisor to UNESCO's global education monitor report 2016.

**CHIN SHOU WANG**

**PROFESSOR, NATIONAL TSING HUA UNIVERSITY  
TAIWAN**



Dr. Juju Wang is Professor of Environmental Sociology at National Tsing Hua University in Taiwan. He earned his graduated degrees in Japan and the U.S. respectively. Juju has published three books about environmental sociology. Juju led pilot research issues in Taiwan, such as Social Impact Assessment (1990), soundscape (1993), national trust movement (1996), environmental justice (1997), environmental refugee and green collar (1998), Gross National Happiness (2008) and so forth. He has also been devoting himself to promoting SCI (Social Contribution Index) by participating in NGO's grassroots movements like green market movement and national trust movement, in addition to

being a three-time delegate to the Earth Summit. Juju is the past President of National United Univ. in Taiwan. In addition, he has run the first residential college, empowering students in social participation, at his university in Taiwan for more than five years. Furthermore, Juju is past Presidents for two NGOs in Taiwan: Taiwan Environmental Protection Union (TEPU), and Taiwan National Trust (TNT). Currently, he has been devoting himself to promoting action-oriented discourse in terms of SD (Social Design) to SD (Sustainable Development).

**CHIN YEN WANG**

**SENIOR SECRETARY & DEPUTY DIRECTOR, MINISTER'S OFFICE  
ENVIRONMENTAL PROTECTION ADMINISTRATION-TAIWAN  
TAIWAN**



With solid training in environmental science and a graduate degree from University of Tsukuba, Japan, Mr. Chin-Yen Wang has devoted himself to environmental work in the Environmental Protection Administration of Taiwan. He has had experience in projects, such as construction and acceptance of incinerators, promoting incineration bottom ash recycling, water quality and ecological engineering, river pollution inspection, reviewing of eco-label applications, and holding the Green Living Expo through his career with the Department of Incinerator Construction, Bureau of Environmental Inspection, Department of Water Quality Protection, and the Department of Supervision Evaluation and Dispute

Resolution. He served as the commissioner of the Bureau of Environmental Protection Hsin-Chu from 2011 to

2014, leading the city towards becoming a role model for sustainability. In his free time, he also enjoys teaching Japanese at a community college and works as a Japanese editor at Newton Graphic Science Magazine.





全球環境教育夥伴諮詢顧問團會議  
GEEP Advisory Group Meeting  
王副主任欽彥 致詞參考稿

行政院環境保護署

時間：106 年 5 月 24 日上午 09：00

地點：UN Environment International Environmental Technology Centre (IETC)

參加人員：如附

美國環保署代表 Ginger Potter 及 Justin Harris，北美環境教育學會執行長 Judy Braus，日本環境部 Reiji Ikeda，日本大阪市環境局代表 Makoto Mihara，以及臺北駐大阪經濟文化辦事處代表謝秘書及其他來自世界各地的各位女士、先生，大家好！我是環保署署長室王欽彥副主任，非常感謝聯合國環境署 Keith Alverson 及 Mahesh Pradhan，如此大力的協助並提供這麼舒適的會議場地。

Ms. Potter & Mr. Harris of the US EPA, Ms. Braus of the NAAEE, Ikeda さん of the Ministry of Environment of Japan, Mihara さん of the Osaka City Government, Mr. Hsieh from Taipei Economic and Cultural office (TECO) in Osaka, ladies and gentlemen, good morning! My name is Chin Yen Wang, Deputy Director of the Minister's Office of the Taiwan EPA. Thank you all for coming, and thank you Mr. Alverson and Mr. Pradhan for organizing this meeting and providing such a comfortable venue.

我感到非常榮幸，奉李署長指派參加 GEEP 會議，本次團員除了我之外還有張文芬管理師、王俊秀教授以及甘正寬先生，這是我第一次參與 GEEP 會議，但並不是第一次來日本，本人曾就讀於日本筑波大學環境科學研究所。在日本學成歸國後，即在環保署服務，並擔任過新竹市環境保護局局長。

I feel very honored being appointed by Minister Lee to attend the GEEP meeting. My fellow attendants from Taiwan include Ms. Chang from EPA, professor Wang and Mr. Kan. This is my first

GEEP meeting, but not my first time in Japan. I received my graduate degree in Environmental Science from the University of Tsukuba, so if we decide to conduct the meeting in Japanese, I would be more than happy to make the switch. After returning from Japan, I have served in the Taiwan EPA for more than a decade. I was also the Commissioner of the Environmental Bureau of HsinChu City from 2011 to 2014.

今天在座各位都是世界最好的環境教育專家學者，希望大家在今明兩天可以針對這次討論議題充分發言並腦力激盪，並產出可行性的具體成果來回饋 GEEP 夥伴計畫。

Today we've gathered here because every one of you is a leading expert in environmental education. Through all our efforts and your contribution today and tomorrow, I'm sure we will produce great ideas for the success of a sustainable GEEP.

環境教育的區域合作需要不分國界國籍，大家共同攜手合作，才能為子孫後代創造永續的未來，也是大家在此支持此計畫之原因。

Environmental education is important for everyone, regardless of nations, borders or politics. If we work together, we can create a sustainable future. That is why we're all here and supporting the GEEP.

期望在接下來的 2 天的會議，能與大家互相交流並學習各位寶貴的經驗，為環境教育作出良好的貢獻，謝謝。

I look forward to sharing ideas and learning from your precious experiences in environmental education. Thank you.



## 建構環境教育區域合作 奠定全球環境教育合作藍圖

我國環保署及美國環保署「全球環境教育夥伴計畫」，邀請來自 12 國共約 22 名政府官員及非政府組織等環境教育專家學者，於 5 月 24 日及 25 日在日本大阪市聯合國國際環境科技中心召開「全球環境教育夥伴計畫諮詢顧問團會議」，規劃全球及區域之環境教育合作，建立環境教育網絡，以建構永續發展的未來。

此次會議由我國環保署及美國環保署合辦，日本大阪市國際合作計畫經理三原真先生、聯合國環境署國際環境科技中心主任 Keith Alverson 博士等亦受邀出席致詞。我國出席代表為環保署王欽彥簡任秘書，他於開幕時致詞表示，環境教育的區域合作需要不分國界國籍，大家共同攜手合作，才能為子孫後代創造永續的未來。另，台北駐大阪經濟文化辦事處謝銘宏課長亦出席開幕式。

此次於日本大阪市召開之全球環境教育夥伴計畫會議參與之官員及專家學者，分別來自英國、荷蘭、俄羅斯、波札那、印度、墨西哥、澳洲、日本、美國及我國等 10 個國家，其中 2 位來自聯合國環境署、13 位非政府組織代表、5 位政府代表。會議除就日本環境教育經驗進行交流，各國專家學者亦探討環境教育計畫跨國合作之可行性，以吸引更多環境教育頂尖團隊參與，並討論整合區域環境教育網絡，制定各國環境教育連結策略與線上互動資源之開發，以有效運用各國成功環教案例及建立交流合作模式，奠定全球環境教育永續發展的基礎。

過去 24 年來，環保署與美國環保署在外交部與美國在台協會的協助下，建立了深厚的夥伴關係，本次會議將能在此基礎上進一步推動我國環境教育和全球的合作關係。



## 伯利西宣言

### Tbilisi Declaration

全球第一個探討環境教育的國際跨政府會議由聯合國教科文組織籌畫，1977年10月14-26日於前蘇聯喬治亞提比里斯舉行。此會議參與人員來自66個聯合國會員國及2個非會員國，聯合國有8個組織與計劃派代表與觀察員參加，另包含3個跨政府組織與20個國際非政府組織參與。總參與人數達330人。此會議討論內容最終促成伯利西宣言，傳達環境教育對於保存與改善環境，及促進社會平衡發展的重要性的共識。

伯利西宣言與前兩項會議建議定義了各層級(包含地方、國家、區域、國際級)、各年齡層、正式與非正式教育系統中環境教育的框架、理念與方針。總計41項會議建議中，第1到第5項定義環境教育的角色、目標與特性，其餘則為推動環境教育的策略。以下節錄宣言重點與最具代表性的前兩項會議建議。

#### 宣言(節錄)

環境教育應開放予所有年齡層、所有層級、不論正規或非正規教育系統。其中媒體及其所掌握資源負有協助此教育任務的重要責任。環境專家及可能影響環境的決策者應在受訓過程中培養此方面的知識與技能，並了解自己所負的責任。

環境教育應為終身教育，並要能對於快速的變遷做出及時應對。環境教育應教育民眾了解當今世界議題，並使其有能力對保護環境做出貢獻。透過採取全面性、跨領域的措施，環境教育凸顯自然環境與人為環境互相高度依存的關係，同時也忠實呈現今日因、明日果，並展現國際間的不可分割性及人類團結的重要性。

環境教育應積極接觸人群，鼓勵個人主動解決現有問題，鼓勵行動、責任感與改善環境的決心。因其本身特性，環境教育有潛力對於教育改革做出極大貢獻。

## 會議建議

一、會議中建議採用特定準則，以協助引導國家、區域、全球性環境教育的發展：

- 除生物性及物理性要素之外，倫理、社會、文化、經濟也是影響人類決定如何有效運用自然資源以滿足自身需求的關鍵。
- 環境教育是綜合、重塑不同領域與教育經驗以促進對環境問題更全面的理解，進而採取更理性的行動。
- 環境教育基本目的為使民眾瞭解自然與人為環境均是生物、物理、社會、經濟、文化交互作用所產生的複雜環境，進一步培養相應的知識、價值、態度、技能以有效參與解決環境問題、管理環境品質。

- 進一步目標為呈現全球經濟、政治、生態的環環相扣，因此環境教育應協助養成國家與區域的責任感和合作精神，以促成能夠改善環境的新世界秩序。
- 社經發展與環境改善間的複雜關係應特別關注。
- 因此環境教育應傳授足以分析複雜局勢的知能、鼓勵能夠改善環境的倫理、經濟、價值觀。此外也應培養足以策畫及執行有效環境行動的技能。
- 環境教育應讓教育更貼近生活，聚焦在地議題，並透過跨領域、綜合性的分析確實了解環境問題。
- 環境教育不應侷限於年齡或專業。
- 為有效發展環境教育，應利用所有可及的公、私設施，包含正規教育、不同形式的非正規教育、及大眾媒體。
- 為有效改善環境，環境教育應與政府環境相關法規、政策、管理措施、決策連結。

二、認可下列環境教育目的、目標、及方針：

環境教育的目的為：

- 確立對都市與郊區的經濟、社會政治生態密切相關的認知與關注。
- 提供所有人機會以獲取保護及改善環境所需的知識、價值、態度、

決心與技能。

- 創造個人、團體、整體社會對於環境的新行為模式。

環境教育目標範疇為：

- 覺知：協助社會團體與民眾養成對整體環境及相關議題的敏銳度。
- 知識：協助社會團體與民眾建立對環境議題的基礎瞭解，並提供體驗機會
- 獲得環境及相關議題經驗，並具有基礎了解
- 態度：協助社會團體與民眾養成對環境的正確價值觀與關心環境的態度，並啟發主動參與保護或改善環境的動力。
- 技能：協助社會團體與民眾培養足以辨識與解決環境問題的能力。
- 參與：提供社會團體與民眾參與各層級環境活動的機會。

環境教育指導原則為：

- 將環境的全面性納入考量，包含自然環境、人為環境、科技、社會（經濟、政治、文史、倫理、美學）。
- 終身學習，從學前期開始，涵蓋於各階段正規與非正規教育。
- 採取跨領域的執行方式，擷取各領域特色，以建立全面且平衡的



觀點。

- 從地方、國家、區域、國際層級探討重要環境議題，讓學習者可以接收其他地理區域的環境議題資訊。
- 聚焦當下及潛在環境問題，同時不忘歷史脈絡
- 推廣區域及國際合作以解決環境問題的必要性及價值
- 使學習者有機會規劃自身學習路徑，並提供機會下決定及接受相應後果
- 環境敏銳度、知識、問題解決能力、價值觀釐清與任何年齡層都很重要，但低年齡層應著重於學習者生活環境的環境意識。
- 協助學習者發覺環境問題的真正緣由與症狀
- 強調環境問題的複雜性，因此需要發展獨立思考及問題解決能力
- 教學上利用不同學習環境及廣泛運用不同教學策略



## **GEEP Call for Action – Draft May 2017**

### **Preamble**

As a global society, we face unprecedented, and largely human-caused, environmental and social challenges. To help address these, the need for quality environmental education has never been greater, yet provision is inadequate or under threat in many parts of the world.

The **Global Environmental Education Partnership (GEEP)** was launched in 2014 as a response to these challenges and concerns. It is comprised of environmental education policymakers, providers, practitioners and researchers who represent government and nongovernmental sectors from many countries and regions. As a network of networks, it brings together partners who are committed to helping global citizens address environmental and social challenges by developing and strengthening environmental education worldwide.

The GEEP believes there is unprecedented opportunity for this work, and an urgency to it. Given the need to ensure a healthy planet and create a more sustainable future for all, leaders must make more effective use of environmental education as a strategy to improve the environment through quality education, alongside other possibilities such as ethical actions, government policy and regulations, economic and community incentives, and technology.

### **Mission and Goals**

The core mission of the GEEP is to create a vibrant learning network designed to strengthen environmental education locally to globally. To accomplish this mission, the GEEP is striving to:

- build capacity to advance policy, governance, and practice in environmental education around the world, including at the regional, national and local levels
- foster strategic partnerships to create a vibrant “network for networks” resulting in a stronger global environmental education community
- promote and encourage innovation in environmental education on a global scale.

### **Towards an Action Plan for the Partnership**

The GEEP affirms that national and international professional network structures are essential to ensuring the quality of environmental education in their communities, nations and regions. These networks need support from a wide range of policy makers, environmental and educational organizations, and other stakeholders.

The Call for Action that follows specifically addresses policy makers, administrators, curriculum planners, funders, and educators in all nations and jurisdictions of the world. It aims to ensure that all people receive an effective and worthwhile environmental education, and that all educators can advance environmental literacy.

Although environmental education will differ in significant ways around the world, the GEEP holds that it is important that it is recognizable to other educators, and reflects the best of historic commitments and contemporary environmental education scholarship and practice. Thus, while it is important to design and provide environmental education in ways that address local and/or national priorities, the crux of this Call is to strengthen infrastructure for the field and open new horizons and opportunities for environmental education.

Addressing these infrastructural needs and priorities is particularly important when either the provision or quality of environmental education are under threat. It is also crucial for realising the benefits that accrue from membership of a vibrant learning network, most notably, access to solidarity, support, challenge, resources and innovative ideas.

### **Members of GEEP**

Members of the Global Environmental Education Partnership are:

**Convinced** that environmental education is indispensable to the development of responsible and active citizens in the present and future,

**Conscious** that critical thinking, problem-solving and high quality experiences focused on environmental questions can be an informing, enabling, and stimulating focus for education, and contribute to a lifelong enjoyment, understanding and shared responsibility for our world,

**Aware** that environmental teaching and learning at all levels in all jurisdictions may be enhanced by ensuring that all aspects of the environmental education enterprise are guided by evidence based on robust and relevant research findings,

**Applaud** governments that have instituted policies and frameworks for environmental education, ensure there is funding and support to implement these, and make themselves accountable for their implementation and evaluation to citizens,

**Encouraged** by monitoring and evaluation, debate and exchange, and better practice initiatives that foster improvements in the purposes and practices of environmental education,

**Concerned** that environmental education is neglected in some parts of the world, and lacks structure, coherence and support in others,

**Ready** to assist colleagues in building capacity for environmental education, innovate, and counteract the lack of environmental literacy in all countries of the world, and

**Supportive** of the principles set out in:

- the Charter of the United Nations;
- the Universal Declaration of Human Rights and Declaration on the Rights of the Child;
- the Tbilisi Recommendations and the Belgrade Charter on environmental education;
- the Constitution of UNESCO and the UN Sustainable Development Goals; and
- many national curricula and statements on education consistent with the above.

### **A Call for Action**

In order that all people – young to old – have access to high-quality environmental education, the GEEP proposes the following five foci as a **Call for Action** for policy makers, administrators, curriculum developers, educators, and funders to improve the quality and support of environmental education:

1. **Networks:** National and local education policy makers and environmental education associations and educators should create and maintain a strong professional network structure, addressing compelling issues of policy, governance, support, priority and practice in environmental education.
2. **Public support:** National and local education policy makers, as well as environmental educators at all levels, should make the focus and contribution of environmental education for society more explicit in order to encourage higher levels of public support for its place in education, focusing particularly on its value to (a) curriculum, and (b) teaching and learning in formal, informal *and* non-formal settings.
3. **Guidelines for Excellence:** National and local education policy makers should set guidelines for environmental education and the educators who provide environmental education programming to improve practice at all levels.
4. **Comparison and evaluation:** National and local education policy makers and environmental education associations should develop processes that encourage international and meaningful comparison of key facets of environmental education – such as teaching and learning practices, frameworks, professional development, outcomes, evaluation, and innovation – in order to develop and disseminate understandings of the knowledge, skills and values that are core to effective environmental education and strengthen the field.
5. **Research and development:** National and local education policy makers, funders and sponsors of research, and the environmental education community should develop a research agenda for environmental education and facilitate this research to advance the field of environmental education, including through developmental and capacity-building initiatives.

The GEEP commends this global Call for Action to all people – in particular, policy makers, administrators, curriculum developers, practitioners, educators and institutions – committed to developing and supporting quality environmental education around the world.

## Appendix

The history and literature on environmental education and environmental literacy is rich and complex. For the purposes of this Call for Action and consistent with the core principles partners support, the GEEP holds that:

1. **Environmental education** should be lifelong, integrated, active and inclusive. As a form of education, its focus is to help individuals, communities, and organizations learn more about the environment, and develop skills and understanding about how to address global challenges. It has the power to transform lives and society. It informs and inspires. It influences attitudes. It motivates action. In sum, environmental education is a key tool in creating healthier and more civically-engaged communities.

Environmental education typically involves the study of natural and human environments, and draws on a variety of approaches to teaching and learning, reflecting conventional to radical traditions of education. Curriculum and pedagogy in environmental education focus on environment-related phenomena, events and processes that vary within and between places, and in doing so, should be regarded as an essential part of the education of all citizens in all societies.

As a distinguishing feature from other major foci for education, a key focus in environmental education is understanding challenges to matters of flourishing and justice on this planet and within societies, including how to address these matters in education and other settings in ways that are holistic, comprehensive and sufficient to the challenge.

2. **Environmental literacy** is one of the key anticipated outcomes of an environmental education focused on the study of human activities and their interrelationships and interactions with environments from local to global scales.

An environmentally literate person is someone who both individually and together with others: (i) makes informed decisions concerning the environment; (ii) is willing to act on these decisions to improve the wellbeing of other individuals, societies, and the global environment; and (iii) participates in civic life.

Those who are environmentally literate possess, to varying degrees:

- knowledge and understanding of a wide range of environmental concepts, problems, and issues;
- associated cognitive and affective dispositions, skills and abilities; and
- appropriate behavioural strategies to apply the above in ways that ensure sound and effective decisions in a range of environmental contexts.

# The Ahmedabad Declaration 2007

## A Call to Action

### Education for life: life through education

28<sup>th</sup> November 2007

*This declaration was developed from the 24<sup>th</sup> to the 28<sup>th</sup> of November 2007. The drafting process involved more than 1,500 participants from 97 countries at the 4th International Conference on Environmental Education. The conference was sponsored by UNESCO, UNEP and the Government of India and was hosted by the Centre for Environment Education at Ahmedabad, India. Since the first international conference was held in Tbilisi, Georgia, in 1977, conferences have been held every ten years, in Moscow in 1987 and in Thessaloniki, Greece, in 1997. This declaration was drafted in the context of the UN Decade of Education for Sustainable Development.*

Our vision is a world in which our work and lifestyles contribute to the well-being of all life on Earth. We believe that through education, human lifestyles can be achieved that support ecological integrity, economic and social justice, sustainable livelihoods and respect for all life. Through education we can learn to prevent and resolve conflicts, respect cultural diversity, create a caring society and live in peace. We can learn from indigenous and traditional patterns of living that respect and honour the Earth and its life-support systems and we can adapt this wisdom to our fast-changing world. We can make individual, community, national and even global choices with due consideration for the collective good. Individuals including youth, civil society, governments, businesses, funding partners and other institutions can appreciate that their daily actions can shape a viable future of which all can be proud.

Ever-increasing human production and consumption is rapidly undermining the Earth's life-support systems and the potential for all life to flourish. Assumptions about what constitutes an acceptable quality of life for some, often means deprivation for others. The gap between rich and poor is widening. The climate crisis, loss of biodiversity, increasing health risks and poverty are indicators of development models and lifestyles that are unsustainable. Alternative models and visions for a sustainable future do exist and urgent action is needed to make them a reality. Human rights, gender equity, social justice and a healthy environment must become global imperatives. Education for Sustainable Development is essential to making this transformation.

Mahatma Gandhi said, "Let my life be my message." The example we set is all important. Through our actions, we add substance and vigour to the quest for sustainable living. With creativity and imagination we need to re-think and change the values we live by, the choices we make, and the actions we take.

## Ahmedabad Declaration 2007

*We must reconsider our tools, methods and approaches, our politics and economics, our relationships and partnerships, and the very foundations and purpose of education and how it relates to the lives we lead. In making our choices we draw on, and are inspired by, much work that has gone before us, including the Earth Charter and the Millennium Development Goals.*

*Environmental Education processes support and champion Education for Sustainable Development. Such education processes must be relevant, responsive and accountable. Research is encouraged to provide additional rigour and credibility and to identify increasingly effective methods of learning and sharing knowledge.*

*We are all learners as well as teachers. Education for Sustainable Development encourages a shift from viewing education as a delivery mechanism to a lifelong, holistic and inclusive process. We pledge to build partnerships and share our diverse experiences and collective knowledge to refine the vision of sustainability while continually expanding its practice.*

*In a world with increasing capabilities to network, we embrace our responsibilities and commit ourselves to carry forward the recommendations from this conference. The United Nations system and governments worldwide need to support Environmental Education and develop sound Education for Sustainable Development policy frameworks and commit to their implementation.*

*We urge all people to join us in pursuing the principles of sustainability with humility, inclusivity, integrity and a strong sense of humanity. We move forward from Ahmedabad in a spirit of hope, enthusiasm and commitment to action.*





## Overall Recommendations

### Moving forward from Ahmedabad ....Environmental Education in the 21st Century

#### **From Tbilisi to Ahmedabad**

*International conferences mark changes in thinking and approaches. They also set new agendas for action. The first set of international recommendations to guide environmental education were developed in Tbilisi, Georgia, in 1977. Ten years later, in 1987, a conference in Moscow, Russia reviewed progress, and focussed on institutional strategies and action plans to strengthen environmental education. A third international environmental education conference was held in Thessaloniki, Greece in 1997, which debated the role of environmental education in contributing to sustainable development. Following the World Summit on Sustainable Development in 2002, a UN Decade on Education for Sustainable Development (DESD) (2005-2014) was launched, based on earlier recommendations in Chapter 36 of Agenda 21. The 4<sup>th</sup> International Conference on Environmental Education, held in Ahmedabad, India in 2007 within the framework of the UN DESD, marks 30 years after Tbilisi.*

*This document reflects views and perspectives of over 1,500 people from 97 countries attending the Ahmedabad Conference. It concentrates on common themes raised in the conference, and is complemented by a conference Declaration and recommendations on more than 30 topics discussed by working groups at the conference.*

*In drafting this set of recommendations, we recognise this document as one in a range of documents that provide orientation to environmental education in the 21<sup>st</sup> century, most importantly the DESD's International Implementation Scheme and associated regional, sub-regional, national, and local strategies and action plans being developed to guide implementation of the UN Decade.*

## Recommendations

### **How Environmental Education evolved from 1977 to 2007**

In 1977, the Tbilisi Declaration made far reaching recommendations that environmental education should be life long, integrated, active and inclusive. This meeting also recognised the complex and multi-dimensional nature of environmental issues, and the need to investigate the root causes of environmental problems.

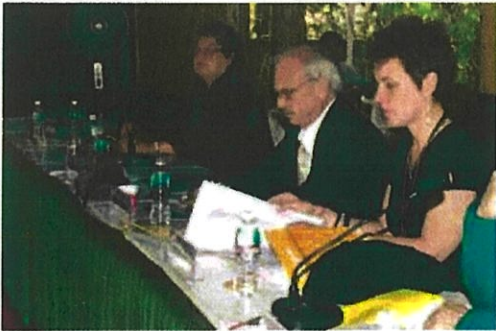
Since 1977 international thinking about environmental education has changed, mainly through a broadening of participation in the field, as well as rapid changes in society, the economy and the global world order. These recommendations build on the strong foundations that environmental education has provided in the evolution of education for sustainable development (ESD) and re-affirm the need to further strengthen environmental education.

A broad review of the evolution of environmental education shows the multi-dimensional nature of these changes:

- **Changes in thinking about education and learning:** In 1987, the emphasis was on education and training, while discussions in 1997 introduced collaborative learning. Today the emphasis is on experimentation and broader social and cultural situated learning processes that take account of context. These changes in thinking about education and learning have been accompanied by changes in pedagogy and methods. However, there are still great challenges to make these approaches to learning work in formal educational settings that are slow to change.
- **Changes in leadership and partnerships:** In 1977, leadership for environmental education was provided mainly by two UN agencies: UNESCO and UNEP. Since then, many international and national NGOs and universities have joined in the process of providing leadership, indicating a growth in institutional contexts for environmental education. Today national governments, national and international organisations are also providing leadership for ESD through various partnerships.



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- **Changes in conceptualising the environment – development relationship:** In 1987 the focus was on environment in the context of social and economic issues, while the 1997 conference recommendations noted that poverty reduction was necessary to achieve sustainability. Today, environmental educators are considering the inter-relationships between environment, society, culture and economics, although many are concerned that economics dominates the others. This raises issues of equity and social justice. The concerns and issues of risk and disaster management and mitigation have also gained recognition in environmental education thinking as we begin to experience global climate change impacts.
- **Changes in communications and access to knowledge:** The last two decades have seen rapid changes in the knowledge, communications and access to information environment. In 1987, communication was mainly through newsletters, in 1997 worldwide internet communication was just emerging. Today there are a wide range of communication possibilities, and the internet has fundamentally changed the knowledge environment. However, access to communication technology remains unequal, and education is not accessible and available to all.
- **Changes in emphasis on issues:** Over the past 30 years the emphasis on environmental issues has changed; from pollution and population growth in 1987 to poverty and sustainable development in 1997 to global climate change, which tops the international political agenda today. There is a recognition that environmental issues such as global climate change are interconnected with a range of related issues such as health, human rights, the right to education, poverty, pollution, business responsibility, consumption and production, biodiversity loss, water quality and quantity, energy, gender, and environmental ethics amongst others. Environmental justice and social justice have become closely linked. Although the widening scope of issues may make the education process seem more complex, it also requires more holistic, comprehensive discussions and policy synergy.

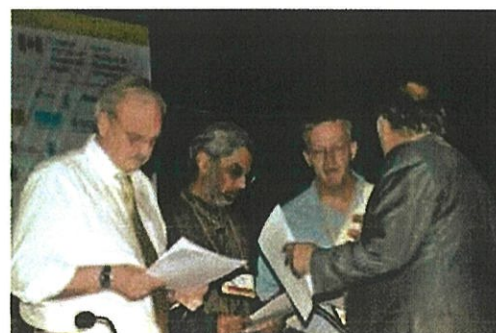
## Recommendations

- **Changes in sites of learning and participation in learning:** *There has also been a broadening of learning sites, media and methodologies. In 1987, environmental education was mainly practised in a narrow range of institutional contexts such as schools and environmental organisations while in 1997 it had widened to include people in business, local government, community development and other areas. Today, environmental education and ESD is practised in the health sector, disaster relief and a wide range of other social and institutional contexts. The widening of learning sites is accompanied by new media and methodologies that allow for border crossings and multi-site learning, and a broadening of participation in the learning process.*

*Within this changing framework, many thousands of environmental education programmes, projects and materials have been developed and used with millions of learners, community members and decision makers in all countries and learning contexts around the world. Networks and partnerships have been formed, official policies have been developed, and professional courses and qualifications exist. Institutions have grown and a new professional field has emerged. Many smaller meetings and conferences have been held, involving both government and civil society organisations. These programmes and projects have been driven by extremely committed people and groups who share a common ethical commitment to a better world for all people and all life forms. They have concern for the future, for the world, and for equity, democracy, sustainability and justice.*

*Despite these efforts, the state of the planet has gone from bad to worse. To this, we have added the crisis of climate change which scientists have confirmed is real and requires urgent action.*

*Thus, we draw attention to a new sense of urgency and the need for a new, broader approach to environmental education in a very different social, economic and political climate, and knowledge environment to that of 1977 when the Tbilisi Declaration was formulated.*



# 4<sup>th</sup> ICEE

## **A New Sense of Urgency and a Need for a New Paradigm**

*Our recommendations for Environmental Education and Education for Sustainable Development in the year 2007 must be rooted in the harsh reality that not only are we exhausting and plundering the resources of the Earth at unsustainable rates, but we are on the threshold of unimaginable devastation that climate change is likely to bring.*

*We no longer need recommendations for incremental change; we need recommendations that help alter our economic and production systems, and ways of living radically. We need an educational framework that not only follows such radical changes, but can take the lead. This requires a paradigm shift. The roots of our present education paradigm the world-over can be traced to the Enlightenment era, which gave birth to science as we know it today and influenced all areas of human thought, activity and institutions. This Enlightenment paradigm is based on the ideas that progress is rooted in science and reason, and that science and reason can unravel the mysteries of nature. It encourages us to 'know' nature in order to use, transform and consume it for our insatiable needs.*

*Today, we need a new Enlightenment to redefine our notion of progress. Since we have rapidly exhausted or polluted nature in pursuit of such progress, this new paradigm needs to recognise that we must live within the limits of nature's systems and that that we need to 'know' nature in order to transform societies to live sustainably in happiness, peace and with dignity, amongst them, and in relation to Planet Earth.*

**Such a new Enlightenment not only requires the specific changes that the following recommendations suggest, but demands fundamental changes in the creation, transmission and application of knowledge in all spheres and at all levels.**

*To implement these recommendations, we need to work for immediate change even as we acknowledge the current state of the planet, the contemporary paradigm under which society and the education system functions, and the need for a fundamental change in the purpose and practices of education.*



### **Environmental Education in the 21<sup>st</sup> Century: Making it happen**

*These recommendations reflect the essence of the hundreds of recommendations made at the conference. They call upon education, environmental and sustainable development practitioners and institutions, including international organisations and national governments, to work individually and collectively to transform the words into actions.*

*The Fourth International Conference on Environmental Education:*

- 1. Reaffirms the recommendations made by the Third International Environmental Education Conference and the United Nations' International Implementation Scheme for the Decade of Education for Sustainable Development that education must be recognised as an effective driver of change in conjunction with other drivers, such as ethical actions, government policies and regulations, economic incentives, and technology.*
- 2. Applauds governments that have instituted policies and frameworks for environmental education and ESD, and urges all countries to give greater priority to funding and supporting the implementation of these policies and frameworks. We urge citizens to hold governments accountable for this implementation.*
- 3. Supports the work of communities, groups and institutions that are working towards a secure and sustainable world, and urge these groups to build on and extend their work within a broad partnership framework.*
- 4. Realises that we need to search continuously for new paradigms and innovations as we do not have all the answers for creating sustainable futures. We must stimulate learners in all sectors of society to envision and create new development paths, networks, and social practices to achieve sustainability.*
- 5. Urges everyone to learn from history, nature and natural systems to develop understandings of how to respect and*



## 4<sup>th</sup> ICEE



*live within the limits of nature, and to evolve social, production, technological and economic systems that are creative, innovative, equitable and sustainable.*

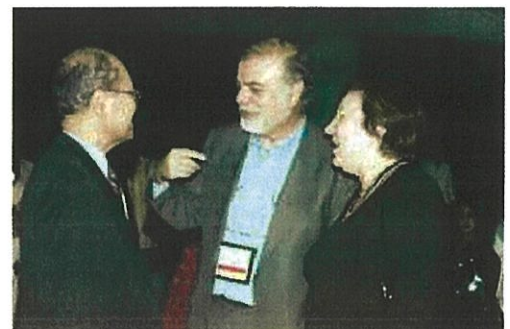
6. *Promotes education that builds capacity to engage critically with contemporary (unsustainable) development discourses and practices and that nurtures and strengthens dialogue and advocacy skills.*
7. *Endorses education for the achievement of equitable and sustainable livelihoods for all people. Such education develops the knowledge, skills and talents necessary for participating with dignity in a range of sustainable livelihood strategies (including employment, self employment, entrepreneurship, and other forms of work). Innovative livelihood strategies, not based on exploitation of nature or other people, need to be developed in all societies around the globe.*
8. *Endorses Gandhi's words that "there is enough in the world for everyone's need, but not for anyone's greed" and recognises that there are people who are still unable to meet their basic needs, people living within their needs, and systems that are turning greed into need. Environmental education must recognise and critically engage the tension between needs and greed.*
9. *Encourages the use of monitoring and evaluation practices that are designed to be a valuable learning process for all involved. A learning-oriented view of monitoring and evaluation can build capacity as well as identify best practices.*
10. *Supports the concept of a Planetary Fund for Environmental Education for building sustainable societies, through development of policies, programmes and initiatives that are equitable, and that are supported and sustained over the long term.*

*The Conference further recommends changes in several areas of thinking and practice.*

## Recommendations

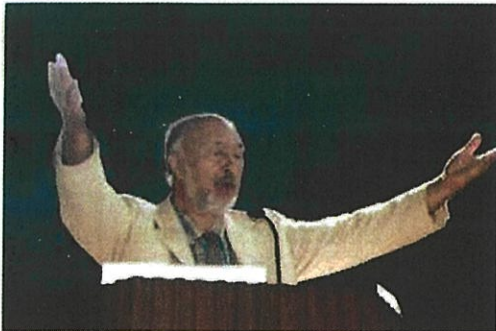
### **I. Change thinking about education and learning**

- 1.1 Promote earth system literacy and systemic thinking skills in environmental education to understand the nature of interdependency within the human family, the biotic community and the planet's life sustaining processes that explain the causes and solutions for the critical challenges we face.*
- 1.2 Orient education towards preparing people to mitigate, live with and adapt to a new risk environment given the way that climate and ecosystem functions are changing.*
- 1.3 Redirect education, which is a social process, towards bringing change in lifestyles (in consonance with sustainable consumption and production); building social cohesion and respect for cultural diversity; directing organisational practices towards sustainability; and towards including all people in all walks of life at all stages of the life long learning process.*
- 1.4 Take an integrated approach to environmental education so that it can be a process of transformation. Teaching and learning should make use of diverse methodologies and be sufficiently flexible to cater to the various needs of learners in different cultures, contexts and nations. Such teaching and learning should incorporate ethical and critical reflection and creative thinking and learning approaches (such as those that characterise arts, design and creative cultural fields) and be inclusive of various approaches to learning. Educators and learners should explore and draw on local environments and knowledge critically and creatively to inform their work.*
- 1.5 Use education to enhance dialogue among educators, community members and leaders, and empower and encourage people to actively participate in civil society. Develop capacity to engage with wider power relations and the effects of power in society.*





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- 1.6 *Employ pedagogies in schools and other formal learning institutions as a means of integrating environmental education and ESD principles and transformative learning approaches across all areas of the curriculum and all aspects of the school / formal learning institution's life. Provide and develop clear direction for formal education curriculum development to enhance progression in environmental learning over time.*
- 1.7 *Use non-formal education practices to enhance ties and strengthen the relationship between formal education and the local community.*
- 1.8 *Help people to review values in relation to policy and behaviour through mandatory interdisciplinary and / or trans-disciplinary courses of learning for sustainability that employ new research and pedagogical approaches. Such courses can be developed (for formal and non-formal learning contexts), shared and reviewed within a learning network approach.*
- 1.9 *Design monitoring and evaluation of environmental education and sustainability practices in such a way that these processes can become a valuable learning process for all involved. A learning oriented view of monitoring and evaluation has the potential to build capacity for critically reflective practices and educational and social change.*

## **2. Change patterns of leadership and partnership formation**

- 2.1 *Base partnerships on a common vision and principles of equity, the ultimate goal of which is the benefit of communities, the public good and the sustainability of life.*
- 2.2 *Bridge gaps between different groups, ministries, sectors (particularly public - private), student leadership and youth movements, as well as other stakeholders through new partnerships that develop understandings and actions to achieve sustainable practices.*

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- 2.3 *Encourage new initiatives and organisations where needed, and work towards building synergies through, for example, the use of active coalitions.*
- 2.4 *Generate educational practices and research that lead to solutions for cross border environmental problems and stronger environmental education and ESD practices at local, national and global levels through inter-country and regional exchanges and co-operative support within a partnership framework.*
- 2.5 *Develop capacity for leadership based on accountability, and the modelling and demonstration of new practices.*
- 2.6 *Support the media and other communication and educational organisations to embrace sustainability practices and to lead by example.*
- 2.7 *Implement and develop strategies that enable decision makers to make informed and accountable evidence-based decisions in the interest of the public good and the sustainability of life.*
- 2.8 *Encourage interested countries from different regions to work in collaboration with UNESCO, UNEP and other UN organisations to continue providing the leadership necessary to exchange knowledge and experience, identify practical ways of working together, including the development of national policy frameworks, pilot programmes and demonstration projects for wider benefit.*

### **3. Change how we understand environmental issues**

- 3.1 *Base environmental education on an understanding of the inter-related dynamics of environment, society, culture and economics, and an understanding of the nature and causes of risks and issues that impact on socio-ecological relations, systems and structures at local, national and global levels.*
- 3.2 *Recognise the multi-faceted nature of environmental issues, and mainstream them across all disciplines and sectors as a priority.*



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- 3.3 *Use education to develop capacity for democratic participation in Earth governance through building understandings of the relationship between ethical principles (such as those outlined in the Earth Charter), legal instruments, multi-lateral agreements and national policy frameworks in all areas related to sustainable development.*
- 3.4 *Integrate education processes as a substantive part of environmental management and sustainable development plans and strategies in all sectors and organisations concerned with environmental change and sustainable development.*
- 3.5 *Document success stories, new practices from communities and educational organisations as well as stories about conservation, innovation and transformation that can be part of a knowledge commons for wider adaptation and/or replication to broaden knowledge of environmental issues and risks and how to respond to them.*

## **4. Change how we conceptualise and engage with the environment – development relationship**

- 4.1 *Orient thinking and educational practices that deal with the environment towards concepts and practices of sufficiency and sensibility, in addition to the current focus on efficiency.*
- 4.2 *Integrate a philosophy of care (for oneself, one another, future generations and the larger living world), peace, truth, justice, tolerance and kindness amongst people, nations and generations in ways that are informed by values such as those presented in the Earth Charter into environmental education and ESD actions and practices. Also, acknowledge the need for critical ethical reflection in education.*
- 4.3 *Treat environment as intrinsic to development decisions, and not as an externality. Educators should engage with*

## Recommendations

*decision makers and other stakeholders to include full environmental and social cost accounting in development decisions so all can learn how to avoid past developmental mistakes.*

- 4.4 *Use environmental education to build capacity to engage critically with contemporary (unsustainable) development discourses and practices, particularly amongst the poor, marginalised and vulnerable, and amongst development thinkers and planners.*
- 4.5 *Build capacity for achieving equitable and sustainable livelihoods, and the knowledge, skills and talents necessary for participation in a range of livelihood strategies (including work, self employment, entrepreneurship and new forms of work). New, more sustainable livelihood strategies are required in all parts of the world, amongst rich and poor.*
- 4.6 *Mainstream environment into the development agenda, on an equal par with social and economic concerns, and provide adequate resources for the education and learning processes needed for this mainstreaming.*
- 4.7 *Bridge the gap between environment and development through effective use of information and research findings, collaborative planning processes (e.g. scenario planning strategies), and systemic and critical thinking.*

### **5. Change how knowledge is viewed, and our communication practices**

- 5.1 *Adapt and use systemic, critical and creative thinking and holistic approaches to knowledge that are grounded in sustainability practices to facilitate ESD in schools, communities and societies.*
- 5.2 *Value traditional wisdom and indigenous knowledge for their potential contribution to re-thinking practices and opportunities for sustainability. Accept a multiplicity of knowledge systems as legitimate in the educational process since many of the solutions may be inherent in knowledge systems practiced in indigenous and traditional systems, now and historically.*



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- 5.3 *Strengthen and extend educational processes based on exploration, negotiation, deliberation and dealing with risks and challenges as these are the basis of a critical mass of 'people's and community' knowledge and coping systems.*
- 5.4 *Value conflict, dissonance and diverse points of view in the learning process as a legitimate basis for knowledge creation and learning. Use active networks to link up and juxtapose a plurality of sources and points of view.*
- 5.5 *Provide citizens and learners with a dynamic space to share visions, educational practices and resources through applications of ICT and other communication mechanisms, systems of portals and other decentralised communication strategies (e.g. radio). Through this, facilitate joint monitoring and evaluation of the status of the Earth, the status of human and non-human governance processes and provide a self-validating and democratic knowledge commons. Make efforts to link up the knowledge of communities not digitally connected to ensure inclusivity in the creation of such a knowledge commons.*
- 5.6 *Nurture and strengthen advocacy (including dialogue) skills to enable better negotiation at all levels (local, regional, national, global) and critical and positive approaches to change. Identify and develop opportunities for developing advocacy skills for change towards sustainability goals.*

## **6. Change sites of learning and participation patterns and practices**

- 6.1 *Review and change existing educational structures, roles and forms to allow for effective environmental education and ESD practices.*
- 6.2 *Create and strengthen new opportunities for participation in sustainability practices through integrated communication between various stakeholders including the educators, media, communities, men and women, and youth groups etc.*

## Recommendations

- 6.3 *Create and extend educational efforts to mobilise diverse groups to participate in planning at different levels to regain control over resources to meet livelihood needs and ensure sustainability of ecological systems.*
- 6.4 *Strengthen and extend learning capability through participation in communities of practice and networks oriented to existing and new sustainability practices.*
- 6.5 *Carefully design and agree upon the components of assessment and evaluation as these are interconnected. All stakeholders should be part of this process so that criteria and processes are transparent, inclusive and change oriented.*
- 6.6 *Integrate emancipatory, participatory and other transformative research approaches into international, national and institutional research agendas.*
- 6.7 *Emphasise and value the role of teacher education as a catalyst for orienting educators to sustainability practices and real world concerns.*
- 6.8 *Draw on the surrounding socio-ecological and cultural environment as a setting for learning and support learning in these settings with appropriate mediation practices.*
- 6.9 *Contribute directly to hands on action and change through environmental education and ESD practice.*

**These recommendations were adopted by the Delegates of the 4<sup>th</sup> International Conference on Environmental Education on 28<sup>th</sup> of November 2007 at the Centre for Environment Education, Ahmedabad, India.**



## Evaluation Methods and Tools

### Stage 1: Catalyzing

- System mapping of the focus issue or problem and/or important system players
- Interviews and/or focus groups with key stakeholders

### Stage 2: Launch

- Draft network theory of change
- Network connectivity mapping
- Survey of members' initial value propositions
- Analysis of network documents (statement of purpose, budget, business plan, etc.)

### Stage 3: Organize

- Network health survey
- Interviews and/or focus groups members
- Observation of network activities/meetings
- Survey members' value proposition satisfaction
- Analysis of network documents

### Stage 4: Perform/Adapt

- Adapting the theory of change as needed
- Network health survey
- Survey of members' value proposition satisfaction
- Analysis of network results and impacts

### Stage 5: Transition or Transform

- Survey of members value proposition satisfaction
- Interviews and/or focus groups wit

## Stages of Network Development with Evaluation Questions



2 years